

## Canopy Management Strategies

Ciriaco Chavez of Boundary Bend Olives, principal investigator for "Evaluation of canopy management strategies" gave an overview of this research at Olive Oil Day. Focusing on increasing oil yield per acre, this project is examining pruning strategies, both mechanically and by hand. Yields in super-high-density orchards are tending to decline after about 10 years and it is anticipated that different pruning strategies can improve both light interception, for higher fruit and oil yields, and better fruit removal, for increased harvest efficiency and less material other than olives (MOO) and fewer mummies.

The project is evaluating five treatments on a 10-year-old super-high-density Arbequina orchard: Hedge every third row at a 5-to-10-degree angle, 30 inches from the trunk (Control/grower standard); Hedge every third row at a 5–10-degree angle, 30 inches from the trunk. Other two rows are tipped at 40" from the wire; Hedge every row at a 5–10-degree angle, 30 inches from the trunk; Hand pruning every row with complementary tipping at 40" from the trunk on the "on year"; Hand pruning every row.

The amount of productive and non-productive material removed, the cost to perform the work, the canopy volume and amount of light intercepted in each treatment and fruit size/weight/quantity/oil content were all evaluated. As emphasized by Ciriaco in his summary, this is only the first year of a four-year study, so it is impossible to draw any conclusions. As the trees adapt to the different treatments, and "corrective" pruning is reduced, the finding will be more meaningful.

Although the Control/Grower standard treatment had the highest yields of both fruit and oil this year, some other items of interest did emerge. It was found that the mechanical treatments removed the least amount of material, but it was proportionately higher in productive growth. And although the hand-pruning treatments had the highest cost, they also had larger fruit with higher oil content. The findings from Year 2 will be presented at next year's Olive Oil Day.